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MARSCHEL, A	
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DATE MAILED: 10/04/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 5/23/94 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☒ Ex Int Sum, Paper 39½.

Part II SUMMARY OF ACTION

1. ☒ Claims 44-47 and 60-62 are pending in the application.

   Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 44-47 and 60-62 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACT

PTOL-326 (Rev. 2/93)

07/110,791

Applicants' arguments that were discussed during the interview of 3/9/94 have been deemed persuasive to overcome the previously applied rejections as stated in the office action, mailed 11/16/93. This interview was referred to by applicants in Paper No. 40, filed 5/23/94. Rejections and/or objections not reiterated from previous office actions are withdrawn as of 3/9/94.

Upon reconsideration of the instant application, the following rejections are newly applied. The Examiner acknowledges that some of these rejections are being set forth for the first time after a somewhat lengthy prosecution and regrets any delay this causes. An attempt to be very thorough to prevent further extended prosecution has been made, however. The hereinunder summarized rejections constitute the complete set of rejections presently being applied to the instant application. Because of the above noted withdrawl of the previously applied rejections and because the following rejections are newly applied, the finality of the office action, mailed 11/16/93, is hereby withdrawn.

The previously applied rejection of the instant invention under 35 USC § 101 has been withdrawn because, although the diagnostic utility of MAC117 amplification or increased expression is controversial both as discussed of record and as noted in Brison on page 32, bridging paragraph between the first and second columns, a more recent summary by Sedlak indicates at least some diagnostic utility in 25-30% of breast tumors in

patients for the instant invention. See the third paragraph in the section therein entitled "Breast Cancer".).

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention, i.e. failing to provide an enabling disclosure.

The claims as presently worded direct the result of amplification or expression measurements as indicative of cancer that is "caused" by the measured effects. This cause and effect relationship is not enabled by the disclosure as filed. It is noted that cancer mechanisms of action are the subject of much experimentation even yet at the present time which is well after the instant filing date. This makes the illucidation of a cause and effect relationship subject to question due to the well known and poorly understood complexities of cancerous growth characteristics. In the instant disclosure the closest demonstration of a cause and effect relationship is that given by the expression results described on pages 22a through 22d and summarized in Table 1 on page 9c. These results support a correlation between increased expression and cancerous type cell

characteristics but do not further document how or whether said increased expression causes cancer. For example, what function does the MAC117 protein have in cells? It is noted, for example, that LTR presence in the DNA used for transformation also correlates with cancerous cell characteristics. Another possible interpretation of the data is that LTR containing vectors cause cancerous transformation of cells independent of MAC117. Other genes present instead of MAC117 may equally result in cancerous cell growth. Additionally integration may occur with LTR containing DNAs but not with the SV containing DNAs or differently with SV DNAs versus LTR containing constructs. It is noted that Table 1 shows that ras containing constructs also result in cancerous characteristics. In summary, the cause and effect relationship between amplification or increased expression and cancer is speculative and therefore lacks enablement regarding the "caused by" limitation in the claims. Other explanations of the data as to cancer mechanism are possible and reasonable. This leaves the one chosen by applicants as being unclear and not clearly and concisely enabled as required by 35 U.S.C. § 112, first paragraph.

Claims 44-47 and 60-62 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

Claims 44-47 and 60-62 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to methods where the sample is a tissue or tumor sample

containing cells from the patient. Claim 44 as presently worded includes a scope where DNA or protein or mRNA which was expressed by a MAC117 gene could be measured in body fluids. There is no instant guidance as to what concentrations of extracellular protein or mRNA, for example, corresponds to increased expression. Additionally there is no disclosure that said DNA, protein, or mRNA is present in measurable amounts outside of cells of the patient's tissue thus making it unpredictable whether body fluids even contain said materials in measurable amounts. It is noted that all examples measure either DNA, protein, or mRNA after lysing cells of the sample. It is noted that claim 60, part (a), practices detection in a tissue sample but that part (b) is not so limited in that it cites a "body sample". It is also noted that claim 62 practices measurements in the tumor but does not clearly direct said measurements to cellular portions of said tumor. It is noted that tumors also contain intercellular regions and blood in blood vessels from which a sample could be obtained from a patient. See M.P.E.P. §§ 706.03(n) and 706.03(z).

Claims 44-47 and 60-62 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to cancer being indicated as caused only by increased expression of the MAC117 gene. By way of clarification, gene amplification is deemed to mean a gene copy number greater than that found in control or non-cancerous cells and increased expression is deemed to mean the presence in sample cells of

either MAC117 mRNA and/or protein encoded by the MAC117 gene in amounts detectably increased compared to that in control or non-cancerous tissue cells. As presently claimed both gene amplification and increased expression indicate cancer presence as caused by either effect. This is not supported by the transformation results described in the specification summarized in Table 1 on page 9c or the expression results set forth on pages 22a through 22d. In both of the cited disclosures only increased expression of either mRNA or protein correlates to cancer type characteristics of cells being studied. This is shown in that the SV40/MAC117 expression vector did not transform cells to result in cancer type characteristics. It is well known that an excess of DNA is used in such transformation experiments that results in multiple gene copies being introduced into many if not most of the transformed cells. The lack of cancer type transformation resulting from said SV40/MAC117 DNA as shown in Table 1 compared to the LTR mediated results measured as producing increased expression clearly indicates that the MAC117 gene amplification itself is not indicative of cancerous cell character and supports this enablement rejection as stated above. See M.P.E.P. §§ 706.03(n) and 706.03(z).

Claims 44-47 and 60-62 are rejected under 35 U.S.C. § 112, first paragraph, as the disclosure is enabling only for claims limited to specific hybridization probes such as the insert in pMAC117 or the segment between Nco I and Acc I as cited on page 18, lines 12-26. No antibody probes are enabled. The reason for

this rejection is the lack of instantly enabled epidermal growth factor (EGF) receptor protein or nucleic acid sequence enablement. The MAC117 gene and encoded protein are instantly described as distinct from EGF receptor gene and encoded protein at several citations such as that at the bottom of page 19, last 4 lines. On the other hand the close similarity between MAC117 gene and protein and EGF receptor gene and protein sequence is discussed on page 20, lines 12-26. This close similarity is disclosed on page 20, lines 12-26, to include segments of each with 69 % nucleotide sequence identity and 85 % amino acid identity. Therefore probes, either nucleic acid or antibody, must be prepared so as to distinguish MAC117 sequences and epitopes from very similar EGF receptor embodiments. This can only be accomplished via the use of EGF receptor nucleic acid sequence and protein control samples to define those probes that are usable in the instant invention beyond those specifically instantly disclosed as to preparation. It is noted that this causes the EGF receptor gene and protein to be essential subject matter to be required for broadly defined probes for negative control usage in selecting MAC117 probes that do not also detect EGF receptor embodiments. The instant disclosure does not include EGF receptor nucleic acid sequence information nor does it contain protein epitope information for such negative control use. The closest disclosure to this essential material is that given in Figure 3 showing a partial EGF receptor amino acid sequence. There is however, no disclosure either in Figure 3 or

the specification as to either how to prepare or procure EGF receptor gene or protein segments or entire molecules for said negative control use. It is noted that a number of printed publications are cited regarding various EGF receptor disclosures. However, reference to these printed publications is insufficient for the disclosure of essential material as discussed above. See the following paragraph regarding the improper incorporation by reference to a printed publication of essential subject matter. See M.P.E.P. §§ 706.03(n) and 706.03(z).

The incorporation of essential material by reference to a foreign application or foreign patent or to a publication inserted in the specification is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or applicant's attorney or agent, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. In re Hawkins, 486 F.2d 569, 179 USPQ 157; In re Hawkins, 486 F.2d 579, 179 USPQ 163; In re Hawkins, 486 F.2d 577, 179 USPQ 167.

Claims 44-47 and 60-62 are rejected as discussed below under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 44-47 and 60-62 are vague and indefinite in that the metes and bounds of what applicants mean regarding the practice of the phrase "a MAC117 gene" as cited in claim 44, line 3, or "the MAC117 gene" as cited in claim 60, lines 4 and 8, are not clearly defined. That is, what set of characteristics limit what is meant by "a (or the) MAC117 gene"? No clearly defined set has

been disclosed. It is noted that abnormal MAC117 genes are observable in some samples. How abnormal is still within the scope of what applicants mean regarding said gene? Do applicants wish to limit said gene via hybridization characteristics? or nucleotide sequence content? or antigenicity? or tumorigenicity? One possible definition is that given in the specification on pages 4 and 9d, lines 2-5 and 10-12, respectively, where the scope of MAC117 gene practice is limited to genes containing the nucleotide sequence shown in Figure 1. This is also unclear for two reasons. Firstly, do applicants mean the nucleotide sequence of Figure 1 to only be that sequence shown at the bottom of the Figure cited as 424 bases in length or, alternatively, do applicants mean a gene containing at least the insert sequence of λMAC117 shown at the top of Figure 1 defined by a restriction map but not actually depicted as a detailed nucleotide sequence similar to that at the bottom of the Figure? Secondly, instant claim 45 appears to limit said gene to comprising the Figure 1 sequence of 424 bases but since this claim depends from claim 44 this implies that claim 44 is broader in scope than claim 45 thus suggesting that what is meant by "a MAC117 gene" is broader than only a gene containing the Figure 1 sequence of 424 bases. What broader definition is meant? Is the content of 424 bases as cited in claim 45, for example, contiguous bases or could insertions be present in a gene as long as the 424 bases cited in claim 45 are present in the gene somewhere? At the bottom of page 3 the gene is disclosed as related to but distinct from the

EGF receptor gene. Is this the basis for defining the gene and if so what distinctness measurement defines the MAC117 metes and bounds? Clarification is requested.

Claims 45 and 46 are vague and indefinite in that it is unclear as to what distinguishes these two claims. Claim 45 contains the phrase "comprises at least in part" whereas claim 46 only contains the word "comprises" instead of the above phrase. Since "comprises" in patent claims is deemed to denote the minimum content of claimed subject matter, via its being open claim language, such as said gene cited in claim 45, it therefore is deemed to also mean the same as the phrase "comprises at least in part". Since applicants have cited different wording, this suggests that claims 45 and 46 should have different meanings. Clarification of what different meaning is meant by applicants regarding claims 45 and 46 is requested. Also the phrase "at least in part" is confusing in that "at least" suggests a minimal content and "in part" suggests that more is present that the "at least" portion. Which phrase controls the metes and bounds of claim 45?

In claim 60, line 4, the phrase "the MAC117 gene" is cited without antecedent basis for a singular form such as suggested by the wording "the" MAC117 gene. Since abnormal forms are disclosed in the specification, it is clear that there exists more than one singular form for this gene. Therefore which form is meant by "the MAC117 gene" in claim 60? See also the above discussed unclarity regarding the metes and bounds of "a MAC117

gene".

Claim 44 cites the intended method to be directed to "diagnosing or evaluating" in line 1 but only accomplishes in recited steps what is deemed "diagnosing" in line 6 cited therein as "indicating the presence of cancer". What method step or steps correspond to "evaluating human cancer" regarding claim 44 practice? It is acknowledged that evaluation might be contrued to be correlated to the extent of amplification or increased expression of a MAC117 gene. That is, minimal amplification or expression could be viewed as a early cancer or one that is in remission whereas large amplification or overexpression could indicate a cancer that is worse than others or becoming more malignant etc. These evaluation criteria which correlates the extent of cancer seriousness to MAC117 amplification or increased expression however are not evident from the claim but only become possible interpretations after contemplating the claim wording at length. Such implied correlations fail to meet the requirements of 35 USC § 112 due to their lack of clarity etc. Clarification of claim wording regarding what evaluation applicants intend to be practiced in claims 44 and those dependent therefrom.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 44-46 and 60 are rejected under 35 U.S.C. § 102(a) as being clearly anticipated by either Semba et al. or Yamamoto et al.

Semba et al. discloses the amplification of c-erbB-2 in human adenocarcinoma of the salivary gland in the title, abstract, and the section on page 6500, entitled "Association of Amplification of the c-erbB-2 Gene with a Primary Human Tumor". These results read on the diagnostic methods as instantly claimed for the carcinomas therein analyzed. Yamamoto et al. disclose c-erbB-2 amplification in cancer cells in the abstract which is cited therein as a suggestion that such amplification is sometimes involved in the neoplastic process. This is a conservative evaluation of diagnostic use of the detection of such amplification based on data for cell samples that serve as the basis for the instant invention also and therefore are equally supportive of diagnostic methods and therefore read on the above rejected claims. Semba et al. and Yamamoto et al. were published less than one year prior to the parent application serial number 06/836,414 thus making a 102(a) rejection appropriate due to priority given to said parent application for the subject matter of the above rejected claims.

The disclosure is objected to because of the following informalities:

In the specification on page 2, line 14, the word "receptorcomplex" appears to be two words run together.

In the specification on page 4, line 15, the word

"complimentary" appears to be misspelled in the context in which it is used.

In the specification on pages 5 and 6 Figures 1 and 2 are supposedly briefly described. These description are confusing when compared to the content of Figures 1 and 2. For example, on page 5, lines 16-20, Figure 1 is summarized as showing a characteristic fragment and detection of specific gene fragments in placenta, A431 cells, or MAC117 cells. It is noted that Figure 1 shows a restriction map of λMAC117 and pMAC117 as well as the sequence of a v-erbB related subsegment thereof. Nowhere in Figure 1 is there a showing of detection of gene fragments nor the cell types cited as placental, A431, or MAC117 cells. The cited brief description of Figure 1 discloses DNA cleavage and southern blotting including hybridization on page 5, line 20, through page 6, line 15, but confusingly without any corresponding disclosure in Figure 1. It is additionally noted that on page 6, line 14, reference to "(A)" and "(B)" is present apparently corresponding to two temperatures. Figure 1, however, does not depict either "(A)" or "(B)" or the cited temperatures. The brief description for Figure 2 is also confusing compared to what Figure 2 actually shows. On page 6, lines 16-18, the brief description discloses that Figure 2 depicts the electrophoretic properties of specific gene fragments and a restriction map of MAC117 (Is there a "λ" missing before MAC117?) and pMAC117. It is noted that Figure 2 only shows a southern blot analysis for placenta, MAC117, and A431 cells probed with either v-erbB or

pMAC117. Nowhere in Figure 2 is there a restriction map. Additionally on page 7, lines 7-9, AG or GT dinucleotides are cited as being underlined in Figure 2 whereas in contrast Figure 2 contains no sequence data whatsoever. In summary, the content of Figures 1 and 2 fail to match what is briefly described in the "BRIEF DESCRIPTION OF DRAWINGS" on pages 5-7.

On page 7, line 4, Figure 1A is referred to whereas there is no Figure 1A present amongst any of the Figures.

In the specification on page 9a, Figure 5 is described but incompletely in that only the restriction map portion of Figure 5 is discussed. This is actually Figure 5A. It is noted that Figure 5B depicts probes a-c but is not described in the brief description on page 9a. It is noted that page 22a, lines 10-13, summarizes Fig. 5B but that this summary is confusingly unconnected with the Figure 5 description on page 9a.

In the specification on page 9a; lines 13 and 18; Fig. 1B, probes a and b; are cited; respectively. Confusingly, the instant disclosure does not contain a Figure 1B nor probes a and b in Figure 1. Similarly, on page 9b, line 14; Fig. 1B, probe b; is cited without either Fig. 1B or probe b being depicted in Figure 1.

In the specification on page 9c a Table 1 is set forth which is awkwardly located between the Brief Description of Figure 9 on page 9b and Figure 10 on page 9d. Table 1 should not be mixed in with the section directed to Figure descriptions in that this causes confusion as to what the section entitled "BRIEF

DESCRIPTION OF DRAWINGS" is directed to.

In the specification on page 9c, next to last line, the concentration range "10^{6} to10^{3}" appears to be incorrectly spaced regarding "to10".

In the specification on page 12, line 24, the word "nirocellulose" appears to be misspelled.

In the specification on page 13, lines 14 and 15, Fig. 1A and 1AB are cited whereas in contrast the disclosure does not contain either Fig. 1A or 1AB.

In the specification on page 9, line 2, a human EGF receptor probe is cited as a fragment of PE7. In the specification on page 13, line 12, the apparently identical probe is cited as the pE7 probe. It is unclear why the capitalization is different between the two citations.

In the specification on page 14, line 2, the enzyme designation "Hi" appears to be lack the normally cited capitalization as "HI".

In the specification on page 15, lines 15-16, the AccI-NcoI region is cited from Fig. 2 whereas in contrast Fig. 2 does not depict either AccI or NcoI or a region interpretable as such.

On page 15, line 20, the radioactive phosphorous isotope is given as "P^{12}" which appears incorrect.

In the specification on page 17, line 11, the word "dithiothretol" appears to be misspelled.

In the specification on page 17, lines 20-21, the phrase "plaques containing approximately 15,000 plaques" is unclear as

to how plaques can contain plaques.

In the specification on page 17, line 1, it is confusing as to what is meant by the phrase "Cloning of MAC117". Since MAC117 is a tumor, applicants may instead have meant to use the phrase "Cloning of λMAC117" in said line 1.

In the specification on page 18, line 12, the phrase "the 6-kbp fragment" is confusing in that a specific fragment is suggested by the use of "the" in said phrase. There is no citation of any specific 6-kbp fragment in the specification before said phrase. Only at the bottom of page 18 does it become clear what 6-kbp fragment is meant.

In the specification on page 18, lines 20 and 26, Fig. 2 is cited as showing a map of a phage and a region demarcated by arrows but in contrast Fig. 2 does not depict any map or region shown with arrows. Figure 1 however does disclose such a map and arrows demarcating a region of repetitive sequences.

In the specification on page 19, starting at line 8, Fig. 1A is cited three times as showing a hybridization pattern whereas in contrast there is no Fig. 1A nor such a pattern in Figure 1.

In the specification on page 19, lines 12 and 16, the words "sequmous" and "frаments", respectively, appear to be misspelled.

In the specification on page 20, first paragraph, Figs. 1A and 1B are discussed as showing a hybridization pattern whereas in contrast there is no Fig. 1A nor 1B nor such a pattern in Figure 1.

In the specification on page 20, lines 15 and 24, Figs. 3

and 2, respectively, are discussed as showing nucleic acid sequence information whereas in contrast there is no nucleic acid sequence information in either of Figs. 3 or 2.

In the specification on page 22a, lines 2 and 19-20, citations directed to Kraus et al. are given without sufficient information by which to find the reference. Similarly, Kraus et al. is cited on page 22c, lines 2-3, without sufficient citation information. On pages 22c and 22d, lines 9 and 16, respectively, DiFiore et al. is also cited without sufficient information.

In the specification on page 22a, lines 3-5, a 0.8 kbp Acc I DNA fragment for a genomic clone of MAC117 is cited with reference to Figure 1. It is noted confusingly that Figure 1 contains a single Acc I site in pMAC117. It is not defined as to what the other end of said 0.8 kbp Acc I DNA fragment is. Is it the rightmost Bam HI site in pMAC117? It may be but is not set forth anywhere either in the instant disclosure nor in Kraus et al. Also consideration of Kraus et al. reveals that this reference discloses a 0.8 kbp Acc I DNA fragment as from a genomic clone of erbB-2 citing King et al.(1985). Thorough consideration of King et al.(1985) reveals that King et al.(1985) completely lacks a disclosure of any 0.8 kbp fragment of any type. Clarification of what this fragment actually is is requested.

In the specification on pages 22c and 22d, last line and line 8, respectively, Table I(Roman numeral) is referred to whereas the only Table in the specification is on page 9c and is

therein given contains the confusingly worded phrase "nove. v-erbB-related gene in demonstrated".

In the specification on page 28, line 6, the word "form" appears misspelled in the context in which it is used.

In the specification on page 28, line 20, the word "boservations" appears to be misspelled.

In the specification on page 28, line 25, the citation directed to Slamon et al. lacks sufficient citation information.

Figure 1 is cited on pages 29 and 31, lines 10 and 6, respectively, confusingly as if it depicts detection information which it does not.

In the specification on page 30, line 16, Figure 11 is cited whereas there is no instantly disclosed Figure 11.

In the specification on page 31, line 5, the word "demonstated" appears to be misspelled.

In the specification on page 34, line 7, the word "instrucitons" appears to be misspelled.

Appropriate correction is required. It is noted that many of the above errors/confusing wordings were pointed out in the previous office action, mailed 6/2/92, but not responded to.

Claims 47, 61, and 62 are allowable over the prior art of record because the prior art of record does not teach or suggest the breast cancer association with MAC117 or the classification or progression of a tumor to a more malignant phenotype measured by MAC117 amplification or increased expression.

No claim is allowed.

labeled therein as Table 1(Arabic numeral).

In the specification on pages 24 and 27, lines 2 of each, Figure 1 is cited as if it discloses detection information whereas in contrast Figure 1 only depicts a restriction map and a sequenced subsegment. Page 27, line 19, also cites Figure 1 as if detection is disclosed therein.

In the specification on page 24, lines 2-5, the Bgl I to Bam HI fragment of pMAC117 is cited as being used to detect the gene and its mRNA as has been set forth. This is not consistent with the record in that said fragment has been cited as being used only for detection of the gene on page 20, first paragraph. Contrary to the above assertion the mRNA detection is disclosed as being performed using either probes a or b of Figure 5 as summarized in the bridging paragraph between pages 22a and 22b wherein the actually probe disclosures are given in Kraus et al., page 606, Figure 2 legend. Figure 1 of Kraus et al. depicts probes a and b as being identical to probes a and b instantly depicted in Figure 5B.

In the specification on page 24, line 28, the probe designation "C" appears to be miscapitalized in comparison to Fig. 5B which shows this probe as "c".

In the specification on pages 26 and 28, lines 16 and 7, respectively, claim 4 is discussed whereas claim 4 has been canceled. Similarly, claim 1 which is cited on page 28, line 8, has been canceled.

In the specification on page 26, lines 16-18, the sentence

Papers related to this application may be submitted to Group 1800 by facsimile transmission. Papers should be faxed to Group 1800 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

The CM1 Fax Center number is either (703) 305-3014 or (703) 308-4227.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703) 308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unseccessful, the examiner's supervisor, Margaret Parr, can be reached on (703) 308-2454.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

A. MARSCHEL:am

September 16, 1994

M. Parr 9/19/94

MARGARET PARR
SUPERVISORY PATENT EXAMINER
GROUP 1800